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State of Idaho
DEPARTMENT OF HEALTH AND WELFARE
Division of Environmental Quality

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Governor
RICHARD P. DONOVAN
Director

January 23, 1991

Mr. Mike Fish
Potlatch Corporation
Northern Woodlands Division
P.O. Box 386
St. Maries, ID 83861

Dear Mike:

RE: Avery Landing Site - Proposed Remediation

This letter is to discuss proposed remediation of contamination at the Avery Landing Site in Avery, Idaho. Our January 9, 1991 meeting with Federal Highway Administration (FHA), Potlatch Corporation and the State of Idaho Division of Environmental Quality (DEQ), at our Coeur d'Alene field office was very informative and productive. As understood, our meeting was held to a technical and informal format and responsibility for clean up at the site will be addressed in the future.

At our meeting Potlatch Corporation informed DEQ their intentions may be to initiate the clean up prior to a responsible party settlement. This letter is a summary of the meeting and a discussion of remediation issues that have subsequently been reviewed by DEQ.

Potlatch Corporation presented two documents at the meeting that had not been previously received by DEQ. The two documents were a report dated August 23, 1990 from Hart Crowser Inc., and engineering plans for a free phase recovery system at the site dated September 20, 1990.

To start the meeting Alex Tula from Hart Crowser presented the findings of the site investigation to the group and answered questions about the field work and the quality of the data. Mr. Tula presented the planned free phase recovery system for the site. Questions about the recovery system and planned operation were answered by both Mr. Tula and Potlatch Corporation representatives. The discussions also initiated questions on the requirements the State of Idaho would have for the recovery system. Discussion outlined a set of technical issues that will be required to be addressed and performed by Potlatch Corporation for DEQ approval of the system. These items follow:

THE SYSTEM

The recovery system as designed would be for free phase petroleum product. The movement of product from the shallow groundwater to the St. Joe River at the site leads us to believe that a trench recovery system would capture product currently moving into the river, by depressing the groundwater and intercepting the product along this flow path.

SYSTEM DESIGN

The recovery system design was presented as a conceptual design for the site which may change depending on field conditions. The trench length would be at least 200 feet long in all cases. Because of the possible long recovery operation times, DEQ recommends that the system be evaluated and designed for long-term operation. Final plans and specifications stamped by an Idaho registered, professional engineer must be submitted to DEQ for review and approval prior to construction. DEQ will be on-site to inspect final trench length.

CONSTRUCTION

Construction will involve exposure of contaminated material to the environment. All construction practices must be planned or field modified to minimize the release of contaminated materials. This includes not digging contaminated materials during periods when runoff is occurring to the St. Joe River from the excavation area. Precautions to control runoff from sudden storm events need to be taken.

Characterization of excavated soil and TPH levels must be provided to DEQ and approved prior to backfilling or landfarming of any contaminated soil. The excavated material from the recovery trench that is not used as backfill must be treated and disposed of properly. If high levels of problem constituents are detected, other appropriate disposal options will be evaluated. If landfarming contaminated soil at the site is approved, landfarming shall be carried out as follows:

° Excavated soil must be stockpiled and covered, protecting the material from precipitation until seasonally warm weather.

° Once warm weather occurs, the soil is spread in a layer not thicker than 6 inches. (If landfarming off-site, an impermeable liner is required.)

° The soil can be analyzed to determine if fertilization is necessary to promote adequate biodegradation. At

minimum, monthly tilling of soil is needed to expose contaminants to aerobic biodegrading conditions. Rotary tilling or disc harrowing and windrowing can be used for this process.

° The soil must be treated until the levels of total petroleum hydrocarbon (TPH) is measured at less than 1000 mg/kg in laboratory sample. Sample locations may be determined by the DEQ at a later date (typically DEQ requires 1 sample for every 100 cubic yards of soil). To prevent surface runoff, a minimum of one foot high berm shall be built around the landfarm using non-contaminated material, to prevent runoff of contaminated soil from reaching the river.

Notification of construction activities must be given to DEQ 30 days prior, to allow site inspection.

MONITORING

Two types of monitoring are required prior to and during operation: Water Level Monitoring, and Product Monitoring.

Water Level Monitoring - Water level monitoring will establish the presence of a groundwater capture zone around the recovery trench. Four existing wells and two new wells will be used in this monitoring. The existing wells are HC-2, HC-3, HC-4, MW-4, and MW-11. Two new wells will be installed: Replacement HC-1 and a well at the midpoint of a straight line between existing well HC-4 and the previous fuel tank location shown on Hart Crowser Figure 1. Access for water level measurement in the recovery trench is needed.

A level survey of the wells and trench access to establish relative elevation is needed prior to construction. Water level measurements prior to system start up need to be made. Monthly measurements of depth to water need to be made during the first quarter of operation. Quarterly measurements are needed for the balance of the first year of operation. A water level measurement schedule for system life will be developed after review of the first year data. The schedule must be submitted to DEQ for review and approval.

The water level data will be used by Potlatch Corp. to show groundwater flow direction prior to, and capture zone after, start up of the recovery system. The recovery system shall be modified if necessary to create a capture zone encompassing the known contaminated area. Reporting on the effectiveness of the recovery system to create a capture zone will be done

in the first quarter of system operation. A totalizing flow meter is necessary to record the volume of water pumped to the infiltration trench.

Product Monitoring - Monitoring of the product will be used to determine when the free phase recovery is complete and the use of the recovered product.

Product thickness will be measured in wells HC-2, HC-3, HC-4, MW-4, MW-11, and the new well. Monthly measurements of product thickness need to made during the first quarter of operation and quarterly measurements are needed for the balance of the first year of operation. A product thickness measurement schedule for system life will be developed after review of the first year data. The schedule must be submitted to DEQ for review and approval.

The recovered product must be analyzed to determine the status of the product as a hazardous waste. Note that prior to March 29, 1991 the hazardous waste determination will be established by the E.P. toxicity test, after March 29, 1991 testing will be by toxicity characteristic leaching procedure (TCLP). The DEQ recommends the use of the TCLP test for product testing in all cases. The DEQ also recommends differentiation between tri-valent and hexa-valent chromium in future sample analysis. The recovered product must be used and/or disposed of according to state and federal regulations.

The total amount of product recovered and final destination of the product will be reported to DEQ on an annual basis.

Monitoring Data - Data collected from the site will be forwarded to DEQ within 3 weeks of receipt by Potlatch.

OPERATION AND MAINTENANCE CONSIDERATIONS

Winter time operation of the recovery system could potentially be impossible in the harsh climate of Avery. The DEQ expects Potlatch to make a reasonable effort to operate the system year round but recognizes weather limitations. Shutdowns of the system in extremely cold weather and/or deep snow are expected.

Proper operation of the separation system between product and water is necessary. Free product should not be pumped into the infiltration trench. The infiltration trench itself should not overflow or be a hazard in any way. No discharges into the St. Joe River will be allowed from the system.

Problems in operating the system or planned system shut downs need to be reported to DEQ within 2 working days.

FREE PHASE RECOVERY COMPLETION

Free phase product recovery is considered completed when product thickness is measured at less than 0.1 inch in all monitored wells and recovery trench.

Shut down of the system for a period of 6 months to a year and restart is required to adequately determine recovery is complete. When free product closure levels have been achieved the recovery system will be shut down to rest the system for a specified period of time, and restarted. Levels will then be monitored quarterly for one year.

CONCLUSIONS

DEQ finds the proposed system and associated monitoring, as described, would be satisfactory technology to attempt to remove free phase product from the Avery Landing site. Additional construction and engineering work as noted herein would be needed to evaluate the systems performance. As with any subsurface technology there is risk of unsatisfactory system performance. In this case DEQ would require additional effort to modify the system to operate at a satisfactory level.

The DEQ needs to enter into a consent agreement that thoroughly describes the system including the stipulations herein prior to approval to construct and operate.

We look forward to your reply.

Please feel free to call at 667-3524 if you have questions.

Sincerely,

DIVISION OF ENVIRONMENTAL QUALITY

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